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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,153	02/11/2004	Hsiu-Chuan Lien	MSCP0024USA	2152
27765	7590	08/02/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			WEI, ZHENG	
			ART UNIT	PAPER NUMBER
			2191	

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/708,153

Applicant(s)

LIEN ET AL.

Examiner

Zheng Wei

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to the application filed on 02/11/2004.  
The priority date for this application is 02/13/2003.  
Claims 1-9 are pending and have been examined.

### ***Claim Objections***

2. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

The Office considers any claims which refer to another claim as being a dependent claim. Claim 9 refers to claim 1 and, thus, is considered to depend thereon. However, claim 1 is a method claim which comprises four steps: (a) setting a plurality of breakpoints; (b) executing the IUT; (c) resetting a parameter of the event; (d) executing the event. Claim 9 does not include any limitations which add, delete or change any of these steps. Therefore, claim 9 fails to further limit its parent claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Abramson (Abramson et al. US 5,838,975).

Claims 1 and 9: Abramson discloses a method for testing and debugging computer programs, the method comprising:

- Setting a plurality of breakpoints corresponding to a plurality of events in an implementation under test; (Fig.2, item 12, Col.4, lines 35-41, "Break points and variables to be compared are selected by interaction with the user at step 12 and the user has the option of selecting a common threshold value Tv or individual threshold values for each selected variable.")
- Executing the implementation under test for outputting a diagnosis code of a breakpoint; ( Fig.2, items 13-17, Col.4, lines 42-47, "At step 13 Rp is run on Cr until step 14 detects a break point. Tp is then run on Ct at step 1 until step 16 detects a break point", "The values if the selected variables of Rp and Tp are obtained...")
- Resetting a parameter of the event corresponding to the diagnosis code; (Fig.2, item 17, col.4, lines 47-60, "If the comparison results a comparison flag set to difference, ...")
- Executing the event according to the reset parameter for making the event undergo an error handler. (Fig.2, item 17, col.4, lines 47-60, "If the comparison results a comparison flag set to difference, the differences are output to the user at step 18 by being displayed upon the Visual Display Unit or otherwise", "If at step 17 the comparison of the variables returns the comparison flag set to equal and the end test of Rp and Tp at step 20 results in a NO, the method returns to step 12.")

Claim 2: Abramson discloses the method for program debugging as in claim 1 above, Abramson also discloses that the method further comprising: after

completing the steps of claim 1, repeating last 3 steps for making the implementation under test make all events undergo the error handler. (Fig.2, items 19, 20, Col.4, lines 50-60, "the user may decide at step 19 to continue selecting break points and variables by selecting the Yes option", "If at step 17 the comparison of the variables returns the comparison flag set to equal and the end test of Rp and Tp at step 20 results in a NO, the method returns to step 12.")

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abramson (Abramson et al. US 5,838,975)

Claim 3-4: Abramson discloses the method for program debugging as in claim 1 above, but does not explicitly disclose the breakpoints are set ahead of program codes of the corresponding events or after program codes of the corresponding events. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set breakpoints anywhere in the code in order to adequately support execution control functionality and provide the rich set of functionality needed for the debugger. Therefore, one would have been motivated to set breakpoints before or after the program codes of the corresponding events to narrow down the places where the bugs might occur.

Claim 5: Abramson discloses the method for program debugging as in claim 1 above, wherein the program to be tested is executable computer program (Col.4, lines 26-34, "An executable behaviorally unknown computer program which is the

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program to be tested..."). But doe not disclose that each event corresponds to a computer program code of a peripheral device. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to give an event name to the computer program code. Therefore, one would have been motivated to use a simple event name to refer the computer program code. It makes much easier for user to identify each portion of computer program codes with different functionalities simply by the events.

Claim 7: Abramson discloses the method for program debugging as in claim 1 above which has an error handler to display error message to "Visual Display Unit or otherwise", but does not explicitly disclose the error handler is a system reset. However, it would have been obvious to one having ordinary skill in the art at the time the inversion was make to use the method of system reset to handle found error. One would have been motivated to do so to reset the system to prevent whole system crash when some severe bugs occur.

Claim 8: Abramson discloses the method for program debugging as in claim 1 above which has an error handler to display error message to "Visual Display Unit or otherwise", but does not explicitly disclose the error handler is a system execution interrupt. However, it would have been obvious to one having ordinary skill in the art at the time the inversion was make to use the method of system execution interrupt. One would have been motivated to do so to stop executing or suspend current process, which has bug in it. The user or debugger software can start another process to debug suspended process to find the bug.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abramson (Abramson et al. US 5,838,975) in view of Robinson (Jeffrey I. Robinson, US 5,768,591)

8. Claim 6: Abramson discloses the method for program debugging as in claim 1 above, but does not explicitly disclose that the error handler is an audible tone. However, Robinson discloses a similar method for program debugging as in claim 1 above which the error handler is an audible tone. (Fig.4, items 172, 164, col.12, lines 64-67, "A sound generator 164 is provided and controlled by the message parser and error handler 172"). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use "sound generator" to replace Abramson's method of error handler. One would have been motivated to do so to generate alarm to alert the user when the bug occurs.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059. The examiner can normally be reached on Monday-Thursday 14:00-15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on (571) 270-01065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZW

07/24/2006



James W. Myhre

Supervisory Patent Examiner

07/24/2006